

Remarks

By way of the foregoing amendments, claims 1-4, 7, 10, 12-25 have been amended to more clearly recite that which the Applicant regards as the invention. Claims 27-30 have been added. In addition, the specification has been amended to remove references to some of the claims.

Issues with respect to the dependency of claims 10, 13, 15, 18 and 20 have been addressed by the foregoing amendments. Namely, in each of these claims the phrase "according to one of the claims 1 to 9" has been replaced.

Claims 1, 2, 7, 22-23 and 25 have been rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 3,956,727 to Wolf. As set forth in independent claims 1 and 22, the claimed high temperature superconductor is irradiated with radio frequency electromagnetic energy and/or microwave frequency electromagnetic energy. Examples of such irradiation are presented in the specification at page 8, third and fourth paragraphs, among other locations.

Wolf does not teach or reasonably suggest the use of the claimed frequencies. In contrast to the claimed irradiation, Wolf discloses using light that has a frequency at or above the optical absorption frequency of the superconductor (see, for example, column 3, lines 14-30; column 4, lines 17-20 and column 5, lines 5-11). As is well-known, light has a frequency outside the radio frequency and/or microwave frequency ranges. For at least this reason, reconsideration and withdrawal of this rejection is respectfully requested.

Claim 13 has been rejected under 35 U.S.C. § 102(a) over Japanese Publication No. 2001332775 to Victor Co. of Japan ("Victor"). Victor uses light to vary the superconducting transition temperature of a superconducting switch. As noted above, light has a frequency outside the radio frequency and/or microwave frequency ranges.

The abstract provided with the Victor reference enclosed with the Office action recites that the superconductive structure "changes superconductor transition temperature, based on light irradiation and non-light irradiation condition of an electroluminescent element." It is believed that this abstract is a poor translation. In this regard, the Examiner's attention is directed to the abstract for the Victor reference


from the European Patent Office (EPO) website, esp@cenet (copy enclosed). The passage in question from the EPO translation reads: "The superconducting switch 1 comprises a light emitting section 6 and a superconducting section 3 for varying superconducting transition temperature T_c by on and off of light irradiation of the light emitting section."

The Examiner has indicated that claims 3-6, 8-12, 14-21, 24 and 26 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims. At this time, these claims have not been rewritten in independent form, but Applicant reserves the right to place any or all of these claims in independent form.

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By 
M. David Galin, Reg. No. 41,767

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper (and any other paper or item referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first-class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

March 31, 2004
Date


M. David Galin

Z:\SEC152\152\DWB\BARD\PI\P0115\P0115US.R02.wpd